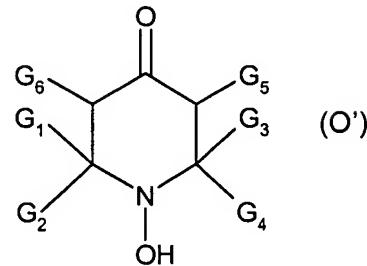
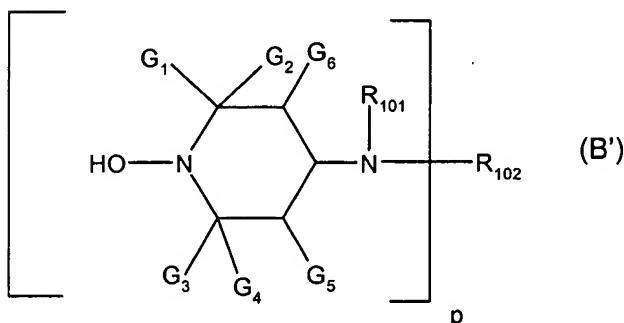
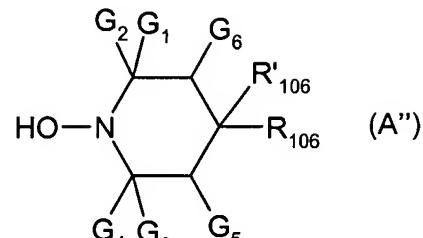
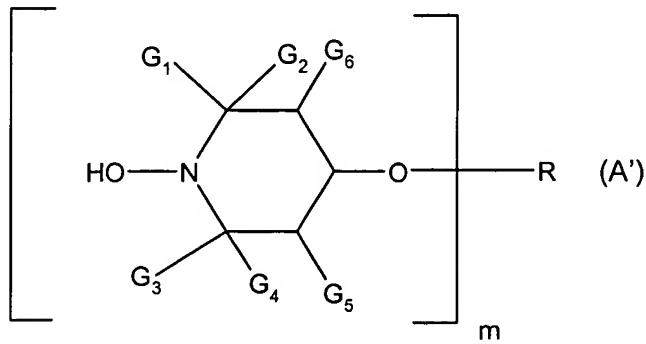


In the Claims

1-8. (canceled)

9. (previously presented) A polymerizable composition comprising

- an ethylenically unsaturated monomer;
- a radical polymerization initiator; and
- a hydroxylamine having a molecular weight of more than 250 g/mol of formula A', A'', B' or O'



wherein

m is 1,

R is hydrogen, C<sub>1</sub>-C<sub>18</sub>alkyl which is uninterrupted or interrupted by one or more oxygen atoms, cyanoethyl, benzoyl, glycidyl, a monovalent radical of an aliphatic carboxylic acid having 2 to 18 carbon atoms, of a cycloaliphatic carboxylic acid having 7 to 15 carbon atoms, or an  $\alpha,\beta$ -unsaturated

carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

$p$  is 1;

$R_{101}$  is  $C_1-C_{12}$ alkyl,  $C_5-C_7$ cycloalkyl,  $C_7-C_8$ aralkyl,  $C_2-C_{18}$ alkanoyl,  $C_3-C_5$ alkenoyl or benzoyl;

$R_{102}$  is  $C_1-C_{18}$ alkyl,  $C_5-C_7$ cycloalkyl,  $C_2-C_8$ alkenyl unsubstituted or substituted by a cyano, carbonyl or carbamide group, or is glycidyl, a group of the formula  $-CH_2CH(OH)-Z$  or of the formula  $-CO-Z$  or  $-CONH-Z$  wherein  $Z$  is hydrogen, methyl or phenyl;

$R_{106}$  and  $R'_{106}$  together are both hydrogen, a group  $=O$  or  $=N-O-R_{120}$  wherein

$R_{120}$  is H, straight or branched  $C_1-C_{18}$ alkyl,  $C_3-C_{18}$ alkenyl or  $C_3-C_{18}$ alkinyl, which may be unsubstituted or substituted by one or more OH,  $C_1-C_8$ alkoxy, carboxy

or  $C_1-C_8$ alkoxycarbonyl; or is  $C_5-C_{12}$ cycloalkyl or  $C_5-C_{12}$ cycloalkenyl;

or is phenyl,  $C_7-C_9$ phenylalkyl or naphthyl which may be unsubstituted or substituted by one or more  $C_1-C_8$ alkyl, halogen, OH,  $C_1-C_8$ alkoxy, carboxy or  $C_1-C_8$ alkoxycarbonyl;

or is  $-C(O)-C_1-C_{36}$ alkyl, or an acyl moiety of a  $\alpha,\beta$ -unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

or is  $-SO_3^-Q^+$ ,  $-PO(O^-Q^+)_2$ ,  $-P(O)(OR)_2$ ,  $-SO_2-R_2$ ,  $-CO-NH-R_2$ ,  $-CONH_2$ ,  $COOR_2$ , or  $Si(Me)_3$ , wherein  $Q^+$  is  $H^+$ , ammonium or an alkali metal cation; or

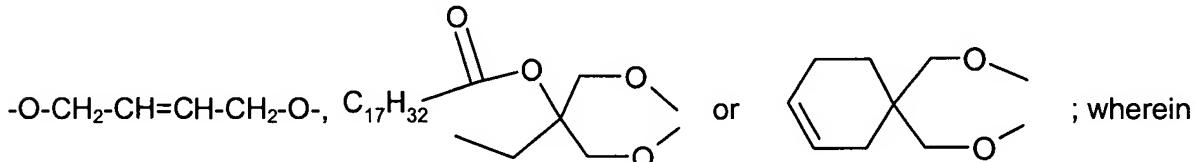
$R_{106}$  and  $R'_{106}$  are independently  $-O-C_1-C_{12}$ alkyl,  $-O-C_3-C_{12}$ alkenyl,  $-O-C_3-C_{12}$ alkinyl,

$-O-C_5-C_8$ cycloalkyl,  $-O$ -phenyl,  $-O$ -naphthyl or  $-O-C_7-C_9$ phenylalkyl; or

$R_{106}$  and  $R'_{106}$  together form one of the bivalent groups  $-O-C(R_{121})(R_{122})-CH(R_{123})-O-$ ,

$-O-CH(R_{121})-CH_{122}-C(R_{122})(R_{123})-O-$ ,  $-O-CH(R_{122})-CH_2-C(R_{121})(R_{123})-O-$ ,  $-O-CH_2-C(R_{121})(R_{122})-CH(R_{123})-$

$O-$ ,  $-O$ -o-phenylene-O-,  $-O$ -1,2-cyclohexyliden-O-,



$R_{121}$  is hydrogen,  $C_1-C_{12}$ alkyl,  $COOH$ ,  $COO-(C_1-C_{12})alkyl$  or  $CH_2OR_{124}$ ;

$R_{122}$  and  $R_{123}$  are independently hydrogen, methyl ethyl,  $COOH$  or  $COO-(C_1-C_{12})alkyl$ ;

$R_{124}$  is hydrogen,  $C_1-C_{12}$ alkyl, benzyl, or a monovalent acyl residue derived from an aliphatic, cycloaliphatic or aromatic monocarboxylic acid having up to 18 carbon atoms;

$G_6$  is hydrogen and  $G_5$  is hydrogen or  $C_1-C_4$ alkyl, and

$G_1$ ,  $G_2$ ,  $G_3$  and  $G_4$  are methyl; or

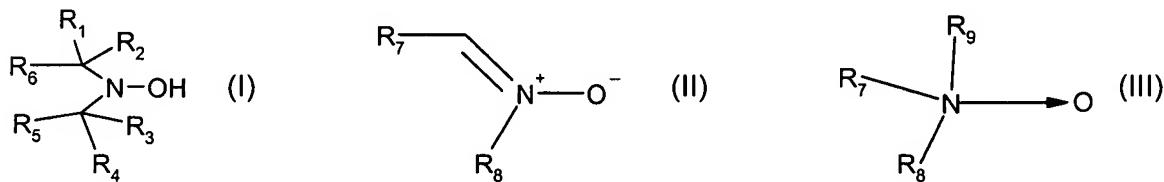
$G_1$  and  $G_3$  are methyl and  $G_2$  and  $G_4$  are ethyl or propyl or  $G_1$  and  $G_2$  are methyl and  $G_3$  and  $G_4$  are ethyl or propyl.

10. (canceled)

11. (previously presented) A process for preparing an oligomer, a cooligomer, a polymer or a copolymer (block, random or graft) by free radical polymerization of at least one ethylenically unsaturated monomer or oligomer, which comprises (co)polymerizing the monomer or monomers/oligomers in the presence of

- b) a free radical initiator and
- c) a hydroxylamine, a nitrone or an alkyl N-oxid having a molecular weight of more than 250 g/mol,

where the hydroxylamine, the nitrone or the alkyl N-oxid are of formulae (I), (II) or (III)



where

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are independently hydrogen, phenyl or C<sub>1</sub>-C<sub>4</sub>alkyl;

R<sub>5</sub> and R<sub>6</sub> are independently C<sub>7</sub>-C<sub>35</sub>alkyl, C<sub>7</sub>-C<sub>35</sub>alkenyl or C<sub>7</sub>-C<sub>35</sub>alkinyl, which may be unsubstituted or substituted by phenyl, halogen, NH<sub>2</sub>, N(R<sub>21</sub>)<sub>2</sub>, -OH, -CN, -NO<sub>2</sub>, or -COOR<sub>21</sub>; or which may be interrupted by -O- or -C(O)-; or

R<sub>5</sub> and R<sub>6</sub> together are an alkylene bridge, which may be interrupted by a -O-, -C(O)- or a -N(C<sub>1</sub>-C<sub>18</sub>alkyl)- group to form a heterocyclic 5, 6, 7 or 8 membered ring, which may be further substituted by a -O-C(O)-]<sub>n</sub>R<sub>20</sub>, NR<sub>21</sub>-C(O)-]<sub>n</sub>R<sub>20</sub> or a ketal group;

n is 1 or 2; wherein, when n is 1, R<sub>20</sub> is hydrogen or C<sub>1</sub>-C<sub>18</sub>alkyl and, when n is 2, R<sub>20</sub> is C<sub>1</sub>-C<sub>18</sub>alkylene; R<sub>21</sub> is hydrogen or C<sub>1</sub>-C<sub>18</sub>alkyl;

R<sub>7</sub> and R<sub>8</sub> are independently C<sub>8</sub>-C<sub>36</sub>alkyl; and

R<sub>9</sub> is C<sub>1</sub>-C<sub>4</sub>alkyl.

12. (previously presented) A process according to claim 11 wherein the polymer obtained has a polydispersity of between 1.1 and 2.5.

13. (previously presented) A process according to claim 11 wherein the polymerization is carried out by heating and takes place at a temperature of between 70°C and 160°C.

14. (original) A process according to claim 11 wherein the hydroxylamine, the nitrone or the alkyl N-oxid having a molecular weight of more than 250 g/mol is present in an amount of 0.001 to 10 mol % based on the monomer or monomers.

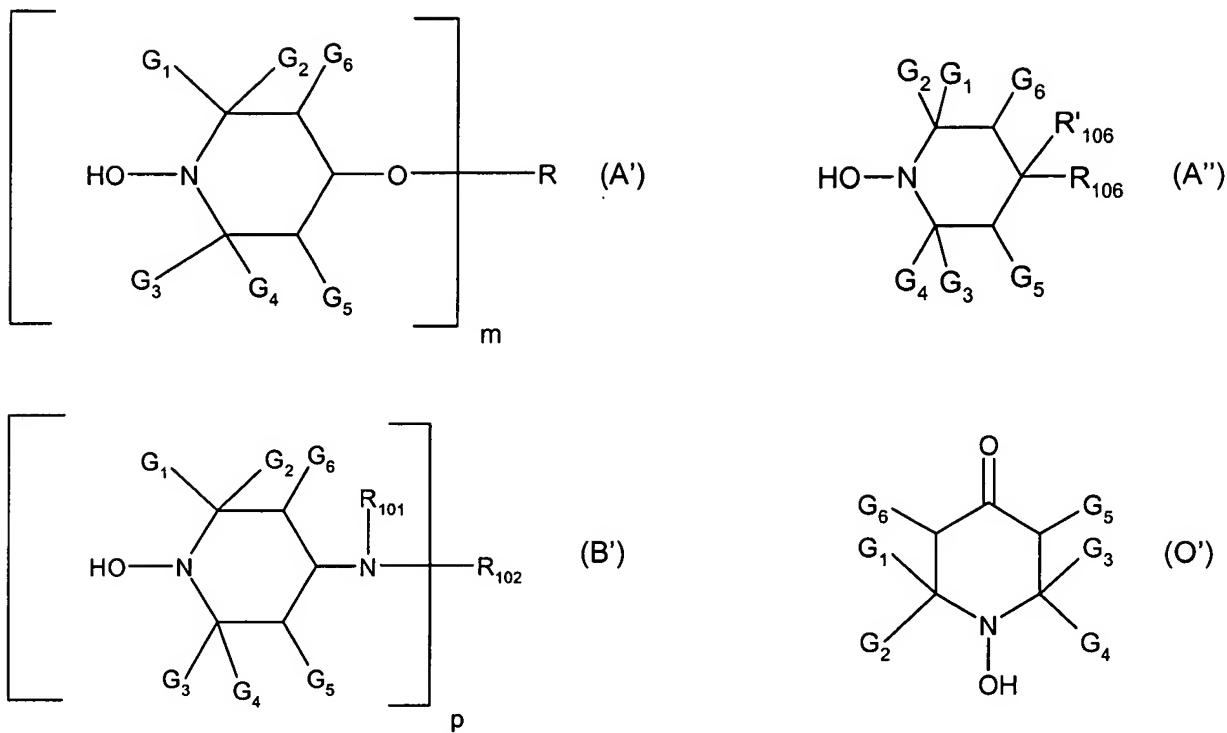
15. (original) A process according to claim 11 wherein the weight ratio between the radical polymerization initiator and the hydroxylamine, the nitrone or the alkyl N-oxid having a molecular weight of more than 250 g/mol is from 1:5 to 5:1.

16. (canceled)

17. (canceled)

18. (previously presented) A process for preparing an oligomer, a cooligomer, a polymer or a copolymer (block, random or graft) by free radical polymerization of at least one ethylenically unsaturated monomer or oligomer, which comprises (co)polymerizing the monomer or monomers/oligomers in the presence of

- b) a free radical initiator and
- c) a hydroxylamine having a molecular weight of more than 250 g/mol of formula A', A'', B' or O'



wherein

*m* is 1,

*R* is hydrogen, C<sub>1</sub>-C<sub>18</sub>alkyl which is uninterrupted or interrupted by one or more oxygen atoms, cyanoethyl, benzoyl, glycidyl, a monovalent radical of an aliphatic carboxylic acid having 2 to 18 carbon atoms, of a cycloaliphatic carboxylic acid having 7 to 15 carbon atoms, or an  $\alpha,\beta$ -unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

*p* is 1;

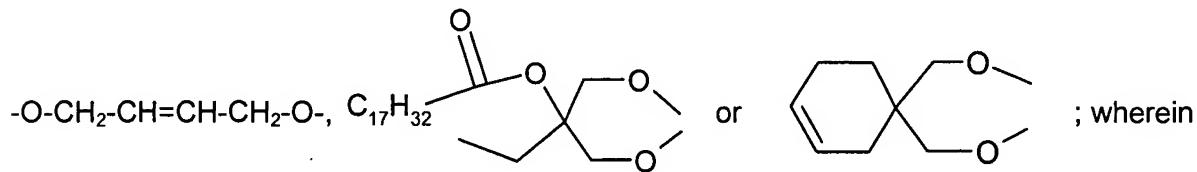
*R*<sub>101</sub> is C<sub>1</sub>-C<sub>12</sub>alkyl, C<sub>5</sub>-C<sub>7</sub>cycloalkyl, C<sub>7</sub>-C<sub>8</sub>aralkyl, C<sub>2</sub>-C<sub>18</sub>alkanoyl, C<sub>3</sub>-C<sub>5</sub>alkenoyl or benzoyl;

*R*<sub>102</sub> is C<sub>1</sub>-C<sub>18</sub>alkyl, C<sub>5</sub>-C<sub>7</sub>cycloalkyl, C<sub>2</sub>-C<sub>8</sub>alkenyl unsubstituted or substituted by a cyano, carbonyl or carbamide group, or is glycidyl, a group of the formula -CH<sub>2</sub>CH(OH)-Z or of the formula -CO-Z or -CONH-Z wherein Z is hydrogen, methyl or phenyl;

*R*<sub>106</sub> and *R'*<sub>106</sub> together are both hydrogen, a group =O or =N-O-R<sub>120</sub> wherein

*R*<sub>120</sub> is H, straight or branched C<sub>1</sub>-C<sub>18</sub>alkyl, C<sub>3</sub>-C<sub>18</sub>alkenyl or C<sub>3</sub>-C<sub>18</sub>alkinyl, which may be unsubstituted or substituted by one or more OH, C<sub>1</sub>-C<sub>8</sub>alkoxy, carboxy or C<sub>1</sub>-C<sub>8</sub>alkoxycarbonyl; or is C<sub>5</sub>-C<sub>12</sub>cycloalkyl or C<sub>5</sub>-C<sub>12</sub>cycloalkenyl; or is phenyl, C<sub>7</sub>-C<sub>9</sub>phenylalkyl or naphthyl which may be unsubstituted or substituted by one or more C<sub>1</sub>-C<sub>8</sub>alkyl, halogen, OH, C<sub>1</sub>-C<sub>8</sub>alkoxy, carboxy or C<sub>1</sub>-C<sub>8</sub>alkoxycarbonyl;

or is  $-C(O)-C_1-C_{36}\text{alkyl}$ , or an acyl moiety of a  $\alpha,\beta$ -unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms; or is  $-SO_3^-Q^+$ ,  $-PO(O^-Q^+)_2$ ,  $-P(O)(OR)_2$ ,  $-SO_2R_2$ ,  $-CO-NH-R_2$ ,  $-CONH_2$ ,  $COOR_2$ , or  $Si(Me)_3$ , wherein  $Q^+$  is  $H^+$ , ammonium or an alkali metal cation; or  $R_{106}$  and  $R'_{106}$  are independently  $-O-C_1-C_{12}\text{alkyl}$ ,  $-O-C_3-C_{12}\text{alkenyl}$ ,  $-O-C_3-C_{12}\text{alkinyl}$ ,  $-O-C_5-C_8\text{cycloalkyl}$ ,  $-O\text{-phenyl}$ ,  $-O\text{-naphthyl}$  or  $-O-C_7-C_9\text{phenylalkyl}$ ; or  $R_{106}$  and  $R'_{106}$  together form one of the bivalent groups  $-O-C(R_{121})(R_{122})-CH(R_{123})-O-$ ,  $-O-CH(R_{121})-CH_{122}-C(R_{122})(R_{123})-O-$ ,  $-O-CH(R_{122})-CH_2-C(R_{121})(R_{123})-O-$ ,  $-O-CH_2-C(R_{121})(R_{122})-CH(R_{123})-O-$ ,  $-O\text{-o-phenylene-O-}$ ,  $-O\text{-1,2-cyclohexyliden-O-}$ ,



$R_{121}$  is hydrogen,  $C_1-C_{12}\text{alkyl}$ ,  $COOH$ ,  $COO-(C_1-C_{12})\text{alkyl}$  or  $CH_2OR_{124}$ ;

$R_{122}$  and  $R_{123}$  are independently hydrogen, methyl ethyl,  $COOH$  or  $COO-(C_1-C_{12})\text{alkyl}$ ;

$R_{124}$  is hydrogen,  $C_1-C_{12}\text{alkyl}$ , benzyl, or a monovalent acyl residue derived from an aliphatic, cycloaliphatic or aromatic monocarboxylic acid having up to 18 carbon atoms;

$G_6$  is hydrogen and  $G_5$  is hydrogen or  $C_1-C_4\text{alkyl}$ , and

$G_1$ ,  $G_2$ ,  $G_3$  and  $G_4$  are methyl; or

$G_1$  and  $G_3$  are methyl and  $G_2$  and  $G_4$  are ethyl or propyl or  $G_1$  and  $G_2$  are methyl and  $G_3$  and  $G_4$  are ethyl or propyl.